

§ 86.1811-10

40 CFR Ch. I (7-1-07 Edition)

2013 model year vehicles (applying Tier 2 standards in-use is limited to the first three years after introduction of a vehicle).

(2) For HLDTs and MDPVs certified prior to the 2013 model year, the Tier 2 HLDT/MDPV evaporative emissions standards in Table S04-3 of § 86.1811-04(e) shall apply to in-use vehicles for only the first three model years after an evaporative family is first certified to the HLDT/MDPV evaporative emission standards in Table S09-1 of paragraph (e) of this section, as shown in Table S09-5. For example, evaporative families first certified to the HLDT/MDPV standards in Table S09-1 in the 2012 model year must meet the Tier 2 HLDT/MDPV evaporative emission standards (Table S04-3) in-use for 2012, 2013, and 2014 model year vehicles (applying Tier 2 standards in-use is limited to the first three years after introduction of a vehicle).

TABLE S09-4.—SCHEDULE FOR IN-USE LDV/LLDT DIURNAL PLUS HOT SOAK EVAPORATIVE EMISSION STANDARDS

| Model Year of Introduction | 2009 | 2010 | 2011 |
|---|----------------------|----------------------|----------------------|
| Models Years That Tier 2 Standards Apply to In-use Vehicles | 2009 2010 2011 | 2010 2011 2012 | 2011 2012 2013 |

TABLE S09-5.—SCHEDULE FOR IN-USE HLDT/MDPV DIURNAL PLUS HOT SOAK EVAPORATIVE EMISSION STANDARDS

| Model Year of Introduction | 2010 | 2011 | 2012 |
|---|----------------------|----------------------|----------------------|
| Models Years That Tier 2 Standards Apply to In-use Vehicles | 2010 2011 2012 | 2011 2012 2013 | 2012 2013 2014 |

[72 FR 8562, Feb. 26, 2007; 72 FR 13352, Mar. 21, 2007]

§ 86.1811-10 Emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

Section 86.1811-10 includes text that specifies requirements that differ from § 86.1811-04 and § 86.1811-09. Where a paragraph in § 86.1811-04 or § 86.1811-09 is identical and applicable to § 86.1811-10,

this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.1811-04” or “[Reserved]. For guidance see § 86.1811-09.” Where a corresponding paragraph of § 86.1811-04 or § 86.1811-09 is not applicable, this is indicated by the statement “[Reserved]”

(a) [Reserved]. For guidance see § 86.1811-09.

(b) through (d) [Reserved]. For guidance see § 86.1811-04.

(e) [Reserved]. For guidance see § 86.1811-09.

(f) [Reserved]. For guidance see § 86.1811-04.

(g) *Cold temperature exhaust emission standards.* (1) Cold temperature CO standards. These cold temperature CO standards are applicable only to gasoline fueled LDV/Ts and MDPVs. Cold temperature CO exhaust emission standards apply over a useful life of 50,000 miles or 5 years (whichever occurs first) as follows:

(i) For LDVs and LDT1s, the standard is 10.0 grams per mile CO.

(ii) For LDT2s, LDT3s and LDT4s, and MDPVs, the standard is 12.5 grams per mile CO.

(iii) These standards do not apply to interim non-Tier 2 MDPVs.

(2) *Cold temperature NMHC standards.* Full useful life fleet average cold temperature NMHC standards are applicable only to gasoline fueled LDV/LLDTs and HLDT/MDPVs, and apply equally to certification and in-use except as otherwise specified in paragraph (u) of this section for in-use standards for applicable phase-in models. Testing with other fuels such as E85, or testing on diesel vehicles, is not required. Multi-fuel, bi-fuel or dual-fuel vehicles must comply with requirements using gasoline only. For LDV/LLDTs, the useful life is 120,000 miles or 10 years, whichever comes first. For HLDT/MDPVs, the useful life is 120,000 miles or 11 years, whichever comes first. There is not an intermediate useful life standard for cold temperature NMHC standards.

(i) The standards are shown in the following table:

TABLE S10-1—FLEET AVERAGE COLD TEMPERATURE NMHC FULL USEFUL LIFE EXHAUST EMISSION STANDARDS

| Vehicle weight category | Cold temperature NMHC sales-weighted fleet average standard (grams/mile) |
|--|--|
| LDVs & LLDTs (≤6,000 lbs GVWR) | 0.3 |
| HLDTs (>6,000–8,500 lbs GVWR) & MDPVs (>8,500–10,000 lbs GVWR) | 0.5 |

(ii) The manufacturer must calculate its fleet average cold temperature NMHC emission level(s) as described in § 86.1864-10(m).

(iii) During a phase-in year, the manufacturer must comply with the fleet average standards for the required phase-in percentage for that year as specified in paragraph (g)(3) of this section, or for the alternate phase-in percentage as permitted under paragraph (g)(4) of this section.

(iv) For model years prior to 2010 (LDV/LLDTs) and 2012 (HLDT/MDPVs), where the manufacturer desires to bank early NMHC credits as permitted under § 86.1864-10(o)(5), the manufacturer must achieve a fleet average standard below the applicable standard. Manufacturers must determine compliance with the cold temperature NMHC fleet average standard according to § 86.1864-10(o).

(3) *Phase-in of the cold temperature NMHC standards.* Except as permitted in § 86.1811-04(k)(5)(vi) and (vii) regarding small volume manufacturers, manufacturers must comply with the phase-in requirements in Tables S10-2 and S10-3. Separate phase-in schedules are provided for LDV/LLDTs and for HLDT/MDPVs. These requirements specify the minimum percentage of the manufacturer's LDV/LLDT and HLDT/MDPV 50-State sales, by model year, that must meet the fleet average cold temperature NMHC standard for their full useful lives. LDVs and LLDTs must be grouped together to determine compliance with these phase-in requirements, and HLDTs and MDPVs must also be grouped together to determine compliance with these phase-in requirements. Tables S10-2 and S10-3 follow:

TABLE S10-2—PHASE-IN PERCENTAGES FOR LDV/LLDT COLD TEMPERATURE NMHC REQUIREMENTS

| Model year | Percentage of LDV/LLDTs that must meet requirement |
|---------------------------|--|
| 2010 | 25 |
| 2011 | 50 |
| 2012 | 75 |
| 2013 and subsequent | 100 |

TABLE S10-3—PHASE-IN PERCENTAGES FOR HLDT/MDPV COLD TEMPERATURE NMHC REQUIREMENTS

| Model year | Percentage of HLDT/MDPVs that must meet requirement |
|---------------------------|---|
| 2012 | 25 |
| 2013 | 50 |
| 2014 | 75 |
| 2015 and subsequent | 100 |

(4) *Alternate phase-in schedules for cold temperature NMHC standards.* (i) Manufacturers may apply for alternate phase-in schedules that would still result in 100% phase-in by 2013 and 2015, respectively, for LDV/LLDTs and HLDT/MDPVs. An alternate phase-in schedule submitted by a manufacturer is subject to EPA approval. The alternate phase-in will not be used to delay full implementation past the last year of the primary phase-in schedule (2013 for LDV/LLDTs, 2015 for HLDT/MDPVs). An alternate phase-in schedule will be acceptable if it satisfies the following conditions (where API = Anticipated Phase-In percentage for the referenced model year):

LDV/LLDTs:

$$(6 \times \text{API}_{2008}) + (5 \times \text{API}_{2009}) + (4 \times \text{API}_{2010}) + (3 \times \text{API}_{2011}) + (2 \times \text{API}_{2012}) + (1 \times \text{API}_{2013}) \geq 500\%, \text{ and } (6 \times \text{API}_{2008}) + (5 \times \text{API}_{2009}) + (4 \times \text{API}_{2010}) \geq 100\%$$

HLDT/MDPVs:

$(6 \times \text{API}_{2010}) + (5 \times \text{API}_{2011}) + (4 \times \text{API}_{2012}) + (3 \times \text{API}_{2013}) + (2 \times \text{API}_{2014}) + (1 \times \text{API}_{2015}) \geq 500\%$, and $(6 \times \text{API}_{2010}) + (5 \times \text{API}_{2011}) + (4 \times \text{API}_{2012}) \geq 100\%$,
or

$(6 \times \text{API}_{2010}) + (5 \times \text{API}_{2011}) + (4 \times \text{API}_{2012}) + (3 \times \text{API}_{2013}) + (2 \times \text{API}_{2014}) + (1 \times \text{API}_{2015}) \geq 600\%$

(ii)(A) For LDV/LLDTs, if the sum of products in paragraph (g)(4)(i) of this section is greater than or equal to 500%, which is the sum of products from the primary phase-in schedule $(4 \times 25\% + 3 \times 50\% + 2 \times 75\% + 1 \times 100\% = 500\%)$, then the alternate phase-in schedule is acceptable, except as prohibited in paragraphs (g)(4)(i) and (iii) of this section. In addition, manufacturers electing to use an alternate phase-in schedule for compliance with the cold temperature NMHC exhaust emission standards must ensure that the sum of products is at least 100% for model years 2010 and earlier for LDV/LLDTs. For example, a phase-in schedule for LDV/LLDTs of 5/10/10/45/80/100 that begins in 2008 would calculate as $(6 \times 5\%) + (5 \times 10\%) + (4 \times 10\%) = 120\%$ and would be acceptable for 2008-2010. The full phase-in would calculate as $(6 \times 5\%) + (5 \times 10\%) + (4 \times 10\%) + (3 \times 45\%) + (2 \times 80\%) + (1 \times 100\%) = 515\%$ and would be acceptable for 2008-2013.

(B) For HLDT/MDPVs, if the sum of products in paragraph (g)(4)(i) of this section is greater than or equal to 500%, which is the sum of products from the primary phase-in schedule $(4 \times 25\% + 3 \times 50\% + 2 \times 75\% + 1 \times 100\% = 500\%)$, then the alternate phase-in schedule is acceptable, except as prohibited in paragraphs (g)(4)(i) and (iii) of this section. In addition, manufacturers electing to use an alternate phase-in schedule for compliance with the cold temperature NMHC exhaust emission standards must ensure that the sum of products is at least 100% for model years 2012 and earlier for HLDT/MDPVs. Alternately, if the sum of products is greater than or equal to 600%, then the alternate phase-in schedule is acceptable, except as prohibited in paragraphs (g)(4)(i) and (iii) of this section. If the sum of products is greater than or equal to 600%, then there are no requirements on the sum of products for model years 2012 and earlier.

(iii) Under an alternate phase-in schedule, the projected phase-in percentage is not binding for a given model year, provided the sums of the actual phase-in percentages that occur meet the appropriate total sums as required in the equations of paragraph (g)(4)(i) of this section, and provided that 100% actual compliance is reached for the appropriate model year, either 2013 for LDV/LLDTs or 2015 for HLDT/MDPVs.

(5) Manufacturers must determine compliance with required phase-in schedules as follows:

(i) Manufacturers must submit information showing compliance with all phase-in requirements of this section with their Part I applications as required by § 86.1844(d)(13).

(ii) A manufacturer electing to use any alternate phase-in schedule permitted under this section must provide in its Application for Certification for the first year in which it intends to use such a schedule, and in each succeeding year during the phase-in, the intended phase-in percentages for that model year and the remaining phase-in years along with the intended final sum of those percentages as described in paragraph (g)(4)(i) of this section. This information may be included with the information required under § 86.1844-01(d)(13). In its year end annual reports, as required under § 86.1844-01(e)(4), the manufacturer must include sufficient information so that the Administrator can verify compliance with the alternate phase-in schedule established under paragraph (g)(4)(i) of this section.

(6)(i) Sales percentages for the purpose of determining compliance with the phase-in of the cold temperature NMHC requirements must be based upon projected 50-State sales of LDV/LLDTs and HLDT/MDPVs of the applicable model year by the manufacturer to the point of first sale. Such sales percentages must be rounded to the nearest 0.1 percent.

(ii) Alternatively, the manufacturer may petition the Administrator to allow actual volume produced for U.S. sales to be used in lieu of projected U.S. sales for purposes of determining compliance with the phase-in percentage requirements under this section.

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The manufacturer must submit its petition within 30 days of the end of the model year. For EPA to approve the use of actual volume produced for U.S. sales, the manufacturer must establish to the satisfaction of the Administrator, that actual production volume is functionally equivalent to actual sales volume of LDV/LLDTs and HLDV/MDPVs sold in all 50 U.S. States.

(h) through (s) [Reserved]. For guidance see § 86.1811-04.

(t) [Reserved]. For guidance see § 86.1811-09.

(u) *Cold temperature NMHC exhaust emission in-use standards for applicable*

phase-in models. An interim full useful life in-use compliance standard is calculated by adding 0.1 g/mi to the FEL to which each test group is newly certified, and applies to that test group only for the model years shown in Tables S10-4 and S10-5. Otherwise, the in-use standard is the certification standard from paragraph (g)(2) of this section. The standards apply for purposes of in-use testing only and does not apply to certification or Selective Enforcement Auditing. Tables S10-4 and S10-5 follow:

TABLE S10-4.—IN-USE STANDARDS FOR APPLICABLE PHASE-IN LDV/LLDTs

| Model Year of Introduction | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|------------------------------|------------------------------|------------------------------|----------------------|----------------------|--------------|
| Models years that the interim in-use standard is available | 2008 2009 2010 2011 | 2009 2010 2011 2012 | 2010 2011 2012 2013 | 2011 2012 2013 | 2012 2013 2014 | 2013 2014 |

TABLE S10-5.—IN-USE STANDARDS FOR APPLICABLE PHASE-IN HLDV/MDPVs

| Model Year of Introduction | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|--|------------------------------|------------------------------|------------------------------|----------------------|----------------------|--------------|
| Models years that the interim in-use standard is available | 2010 2011 2012 2013 | 2011 2012 2013 2014 | 2012 2013 2014 2015 | 2013 2014 2015 | 2014 2015 2016 | 2015 2016 |

[72 FR 8564, Feb. 26, 2007]

§ 86.1812-01 Emission standards for light-duty trucks 1.

This section applies to 2001 and later model year light-duty truck 1's fueled by gasoline, diesel, methanol, natural gas and liquefied petroleum gas fuels except as noted. Multi-fueled vehicles shall comply with all requirements established for each consumed fuel. For methanol fueled vehicles, references in this section to total hydrocarbons shall mean total hydrocarbon equivalents and references to non-methane hydrocarbons shall mean non-methane hydrocarbon equivalents. This section does not apply to 2004 and later model year vehicles, except as specifically referenced by § 86.1811-04.

(a) *Exhaust emission standards.* (1) Exhaust emissions shall not exceed the following standards at intermediate useful life:

(i) [Reserved]

(ii) Non-methane hydrocarbons: 0.25 grams per mile.

(iii) Carbon monoxide: 3.4 grams per mile.

(iv) Oxides of nitrogen: 0.4 grams per mile except diesel fuel which have a 1.0 gram per mile standard.

(v) Particulate matter: 0.08 grams per mile.

(2) Exhaust emissions from 2001 and later model year light-duty truck 1's shall not exceed the following standards at full useful life:

(i) Total hydrocarbons: 0.80 grams per mile, except natural gas, which has no standard. For purposes of this section, the full useful life total hydrocarbon standard is for 11 years or 120,000 miles whichever occurs first.

(ii) Non-methane hydrocarbons: 0.31 grams per mile.

(iii) Carbon monoxide: 4.2 grams per mile.

(iv) Oxides of nitrogen: 0.6 grams per mile except diesel fuel which have a 1.25 gram per mile standard.